## **Hometown Connections**°

DELIVERING VALUE TO PUBLIC POWER

#### **BOROUGH OF EPHRATA**

>> Case Study: HCI Advanced Metering Program



### >> INTRODUCTION

The Borough of Ephrata Electric Division dates back to 1902, when the Borough purchased the utility for \$7,000. Today, the electric system distributes approximately 140 millionkilowatt hours of power annually to nearly 6,700 meters, and has about \$16.8 million in sales. Committed to building a system that will provide efficient, safe, affordable, and reliable power, now and well into the future, Ephrata partnered with American Municipal Power, Inc. (AMP), and other project partners, replacing all of its electric meters with Advanced Metering Infrastructure (AMI) technology.

Project cost· \$1	il 2017
110jeet coot.	5 million
Meters replaced: 6,7	00
Project partners: Aclara Technologies American Municipal Pov BlueBridge Networks Borough of Ephrata ElectSolve Technology So Silver Spring Networks (	ver, Inc. lutions & Servic [Itron]

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### >> REALIZING BENEFITS







System loss rate as reported to EIA for 2016.

# \$340,000

The project was originally projected to decrease system loss by 2 percent, resulting in annual savings of approximately \$340,000.

## 571,20

Ephrata is seeing a decrease in system loss greater than the projected 2 percent and will realize an annual savings of more than \$571,000.

The Borough of Ephrata typically experiences increased system losses from fall into winter. However, that did not happen after the new advanced meters were installed in 2017. System losses at the end of 2017 were the lowest in years. The Borough of Ephrata Electric System is a municipal system owned by its community, meaning savings are passed directly to customers.





### >> ADVANCED METER FACTS

- > Ability for consumers and utilities to access real-time data.
- > Pinpoints exact locations of outages, resulting in a faster response time.
- > Eliminates inaccurate meter readings.
- > Provides tamper detection, reducing energy theft.
- > Takes less than 10 minutes to install a new meter.
- > Allows for more efficient use of utility resources.

#### >> REALIZING BENEFITS

#### >>Customer Service

The Borough has experienced significant improvement in its ability to respond to customer inquiries. With the availability of onthe-spot meter reading, customer service representatives now have real-time information about a customer's meter and the potential for immediate reconciliation of billing disputes is now the norm.

#### >>Disconnection/Reconnection

situations requiring the For disconnection of service, advanced meters provide for immediate action without dispatching field personnel. Prior to AMI, a lineworker would manually shut off service and manually turn on service. Often, disconnection and reactivation of service would happen in the same day, sometimes after hours. AMI eliminates that process. The AMI reconnection process takes less than 30 seconds because service can be reinstated remotely.

During the meter installation phase, other system improvement opportunities were identified and addressed. This was possible by

>> Safety and System Maintenance

addressed. This was possible by having qualified staff (lineworkers) review each meter installation in preparation for mass meter deployment. This allowed the lineworker to identify and address deteriorated services and other upgrades and maintenance needs within the home or facility, leading to an increase in safety, reliability and life of the entire system.

#### >> Billing Efficiency

Advanced meters have led to improved efficiencies in billing. A big reason for this improvement is that AMI eliminates the need for manual meter readings, thus eliminating errors. With AMI it is possible to have fully-accurate reads and billing, for those occasions where one tenant or owner moves out of a property, and another moves in. The accuracy in readings provided by the advanced meters is an incredible benefit of the program.

#### >> Up Next

The savings Ephrata is realizing is directly related to replacing old, inefficient meters with advanced meters. As Ephrata continues with the AMI program, they are working to derive more value out of the large amount of user data the new meters are collecting. The 6,700 advanced meters function as a sort of composite view of Ephrata's electric distribution system, providing the Borough with a better understanding of the systems health and operations. With this new information, the electric department can:

- > predict transformer failures before they impact customers;
- > identify underloaded and overloaded transformers, allowing for better allocation of energy throughout the system; and
- > improve the coordination of regular scheduled maintenance tasks, such as tree-trimming around power lines.

For more information on how the HCI Advanced Metering Program can assist your municipal utility, contact AMI program staff at:

ami@hometownconnections.com